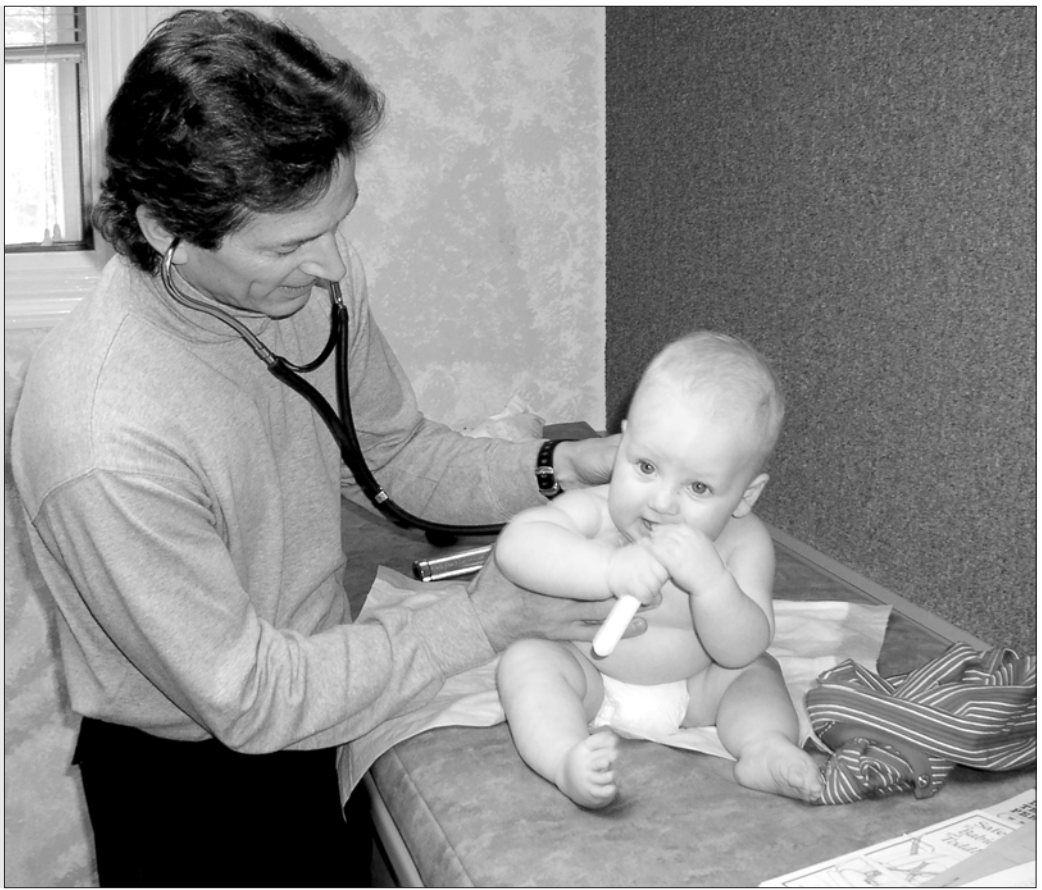
Health Services Financing and Utilization

The availability of, and access to, quality health care directly affects the health of mothers and children. This is especially true of those populations at high risk due to chronic medical conditions or low socio-economic status.

Children may receive health coverage through a number of sources, including private insurance or public programs such as Medicaid or the State Children's Health Insurance Program (SCHIP). Eligibility for public programs is based on a family's income compared to the Federal poverty level. Every State has SCHIP programs that help expand coverage to many uninsured children. Outreach and consumer education are also key components in that expansion. Despite the progress achieved through public programs, approximately 8.5 million children remain uninsured in the United States.

The following section presents data on the utilization of health services within the maternal and child population. The most recent data are summarized by source of payment, type of care, and place of service delivery and are presented by age, income, and race and ethnicity.



VACCINATION COVERAGE

The Healthy People 2010 objective for the complete series of routinely recommended childhood vaccinations is immunization of at least 90 percent of 19- to 35-month-olds with the full series of vaccines. Data released from the CDC's 2003-04 National Immunization Survey show that 80.5 percent of children 19 to 35 months of age had received the recommended 4:3:1:3:3 series of vaccines (4 DTP, 3 polio, 1 MCV, 3 Hib, 3 HepB); 74.5 percent of 19- to 35-month-olds had received the 4:3:1:3:3:1 series, which includes the varicella (chicken pox) vaccine. In the past 5 years, the greatest increases in vaccination rates have occurred with the hepatitis B and varicella vaccines (varicella was added to the schedule in 1996). Since the 1998-99 survey, the vaccination rate for hepatitis B has increased 5 percent to 92.3 percent, while the varicella vaccination rate has risen over 60 percent, from 52.1 percent in 1998-99 to 86.2 percent in 2003-04. Racial and ethnic disparities exist in vaccination rates, and non-Hispanic Black children and American Indian/Alaska Native children (data not shown) have the lowest vaccination rates for each of the major vaccines.

Each year, the CDC publishes an update of the recommended childhood immunization schedule (see facing page). The 2005 schedule continues to encourage the routine use of hepatitis B vaccines for all infants before hospital discharge and the use of yearly influenza vaccines for all children 6 to 23 months of age.

Estimated Vaccination Rates Among Children Aged 19-35 Months, by Race/Ethnicity: 2003-04

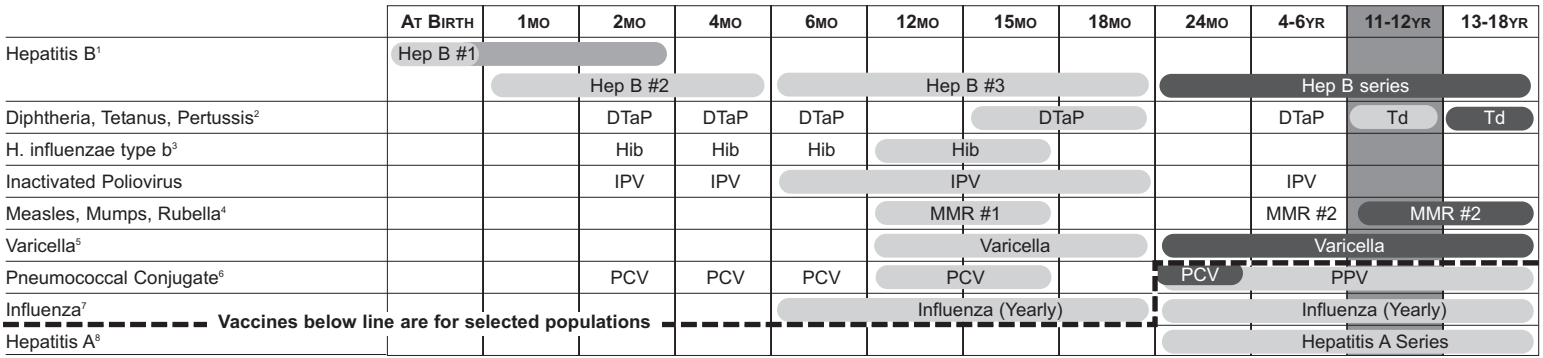
Source: (III.1): Centers for Disease Control and Prevention, National Immunization Survey

	Total	Non-Hispanic White	Non-Hispanic Black	Hispanic
4+ DTP	85.6	87.9	79.2	84.3
3+ Polio	91.6	92.7	89.0	91.0
1+ MMR*	92.9	93.3	90.5	92.9
3+ Hib	93.8	94.9	91.5	93.3
3+ HepB	92.3	93.1	90.2	91.5
1+ Varicella	86.2	85.1	86.1	87.4

**The immunization schedule calls for one dose of measles-containing vaccine (MCV), which can include the measles-mumps-rubella (MMR) vaccine shown above.*

Recommended Childhood and Adolescent Immunization Schedule, United States, 2005

Source (III.2): Centers for Disease Control and Prevention



This schedule indicates the recommended ages for routine administration of currently licensed childhood vaccines, as of December 1, 2004, for children through age 18 years. Any dose not administered at the recommended age should be administered at any subsequent visit when indicated and feasible.

The graphic indicates age groups that warrant special effort to administer those vaccines not previously administered. Additional vaccines may be licensed and recommended during the year. Licensed combination vaccines may be used whenever any components of the combination are indicated and other components of the vaccine are not contraindicated. Providers should consult the manufacturers' package inserts for detailed recommendations. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS). Guidance about how to obtain and complete a VAERS form is available at www.vaers.org or by telephone, 800-822-7967.

1. Hepatitis B (HepB) vaccine. All infants should receive the first dose of HepB vaccine soon after birth and before hospital discharge; the first dose may also be administered by age 2 months if the mother is hepatitis B surface antigen (HBsAg) negative. Only monovalent HepB may be used for the birth dose. Monovalent or combination vaccine containing HepB may be used to complete the series. Four doses of vaccine may be administered when a birth dose is given. The second dose should be administered at least 4 weeks after the first dose, except for combination vaccines which cannot be administered before age 6 weeks. The third dose should be given at least 16 weeks after the first dose and at least 8 weeks after the second dose. The last dose in the vaccination series (third or fourth dose) should not be administered before age 24 weeks.

Infants born to HBsAg-positive mothers should receive HepB and 0.5 mL of hepatitis B immune globulin (HBIG) at separate sites within 12 hours of birth. The second dose is recommended at age 1-2 months. The final dose in the immunization series should not be administered before age 24 weeks. These infants should be tested for HBsAg and antibody to HBsAg (anti-HBs) at age 9-15 months.

Infants born to mothers whose HBsAg status is unknown should receive the first dose of the HepB series within 12 hours of birth. Maternal blood should be drawn as soon as possible to determine the mother's HBsAg status; if the HBsAg test is positive, the infant should receive HBIG as soon as possible (no later than age 1 week). The second dose is recommended at age 1-2 months. The last dose in the immunization series should not be administered before age 24 weeks.

2. Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine. The fourth dose of DTaP may be administered as early as age 12 months, provided 6 months have elapsed since the third dose and the child is unlikely to return at age 15-18 months. The final dose in the series should be given at age **>**4 years. **Tetanus and diphtheria toxoids (Td)** is recommended at age 11–12 years if at least 5 years have elapsed since the last dose of tetanus and diphtheria toxoid-containing vaccine. Subsequent routine Td boosters are recommended every 10 years.

3. Haemophilus influenzae type b (Hib) conjugate vaccine. Three Hib conjugate vaccines are licensed for infant use. If PRP-OMP (PedvaxHIB® or ComVax® [Merck]) is administered at ages 2 and 4 months, a dose at age 6 months is not required. DTaP/Hib combination products should not be used for primary immunization in infants at ages 2, 4 or 6 months but can be used as boosters after any Hib vaccine. The final dose in the series should be administered at age**>**12 months.

4. Measles, mumps, and rubella vaccine (MMR). The second dose of MMR is recommended routinely at age 4-6 years but may be administered during any visit, provided at least 4 weeks have elapsed since the first dose and both doses are administered beginning at or after age 12 months. Those who have not previously received the second dose should complete the schedule by age 11-12 years.

5. Varicella vaccine. Varicella vaccine is recommended at any visit at or after age 12 months for susceptible children (i.e., those who lack a reliable history of chickenpox). Susceptible persons aged **>**13 years should receive 2 doses administered at least 4 weeks apart.

6. Pneumococcal vaccine. The heptavalent **pneumococcal conjugate vaccine (PCV)** is recommended for all children aged 2-23 months and for certain children aged 24-59 months. The final dose in the series should be given at age **>**12 months. **Pneumococcal polysaccharide vaccine (PPV)** is recommended in addition to PCV for certain high-risk groups. See *MMWR 2000;49(RR-9):1-35.*

7. Influenza vaccine. Influenza vaccine is recommended annually for children aged **>**6 months with certain risk factors (including, but not limited to, asthma, cardiac disease, sickle cell disease, human immunodeficiency virus [HIV], and diabetes), healthcare workers, and other persons (including household members) in close contact with persons in groups at high risk (see *MMWR 2004;53[RR-6]:1-40*). In addition, healthy children aged 6-23 months and close contacts of healthy children aged 0-23 months are recommended to receive influenza vaccine because children in this age group are at substantially increased risk for influenza-related hospitalizations. For healthy persons aged 5-49 years, the intranasally administered, live, attenuated influenza vaccine (LAIV) is an acceptable alternative to the intramuscular trivalent inactivated influenza vaccine (TIV). See *MMWR 2004;53(RR-6):1-40*. Children receiving TIV should be administered a dosage appropriate for their age (0.25 mL if aged 6-35 months or 0.5 mL if aged **>**3 years). Children aged **>**8 years who are receiving influenza vaccine for the first time should receive 2 doses (separated by at least 4 weeks for TIV and at least 6 weeks for LAIV).

8. Hepatitis A vaccine. Hepatitis A vaccine is recommended for children and adolescents in selected states and regions and for certain high-risk groups; consult your local public health authority. Children and adolescents in these states, regions, and high-risk groups who have not been immunized against hepatitis A can begin the hepatitis A immunization series during any visit. The 2 doses in the series should be administered at least 6 months apart. See *MMWR 1999;48(RR-12):1-37.*

Footnote: *Recommended Childhood and Adolescent Immunization Schedule United States, 2005*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TIMING OF DENTAL CARE

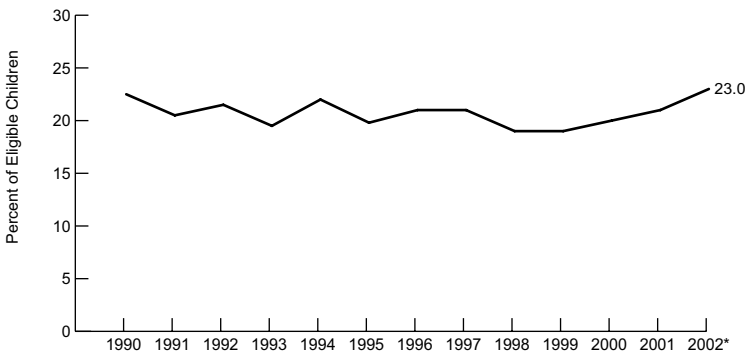
In a 2000 report on oral health, the Surgeon General identified dental caries (tooth decay) as the single most common chronic disease among children in the United States, a condition even more common among children living in families with low incomes. This is a preventable health problem that can significantly affect children's health, ability to concentrate in school, and quality of life.

To promote good oral hygiene, the American Academy of Pediatrics recommends that all children receive an oral health risk assessment by 6 months of age and a dental referral by 3 years; earlier referrals are appropriate for children found to be at risk. In Federal Fiscal Year 2002, only 23 percent of children eligible for services under the Medicaid Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) program received a preventive dental service.

In 2003, 70.8 percent of children had seen a dentist in the past year. Frequency of dental visits among children varies by family income and race and ethnicity. Non-Hispanic White children between the ages of 1 and 18 years were most likely to have visited a dentist or other dental specialist within the past year (75.6 percent), while Hispanic children were least likely (61.3 percent). Children with family incomes at or above 200 percent of the poverty level were almost 30 percent more likely to have seen a dentist in the past year than children living with family incomes below 200 percent of the poverty level.

Children Receiving an EPSDT Preventive Dental Service: 1990-2002

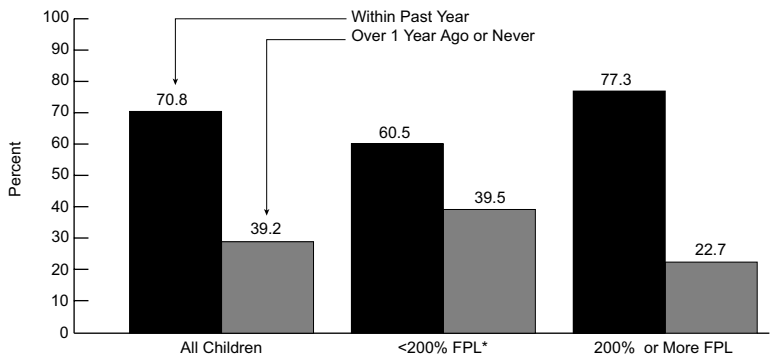
Source (III.3): Centers for Medicare and Medicaid Services



*Includes data from 49 States.

Children Receiving Dental Care in the Past 12 Months, by Family Income: 2003

Source (III.4): Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey



*Federal poverty level, equal to $18,400 for a family of four in 2003.

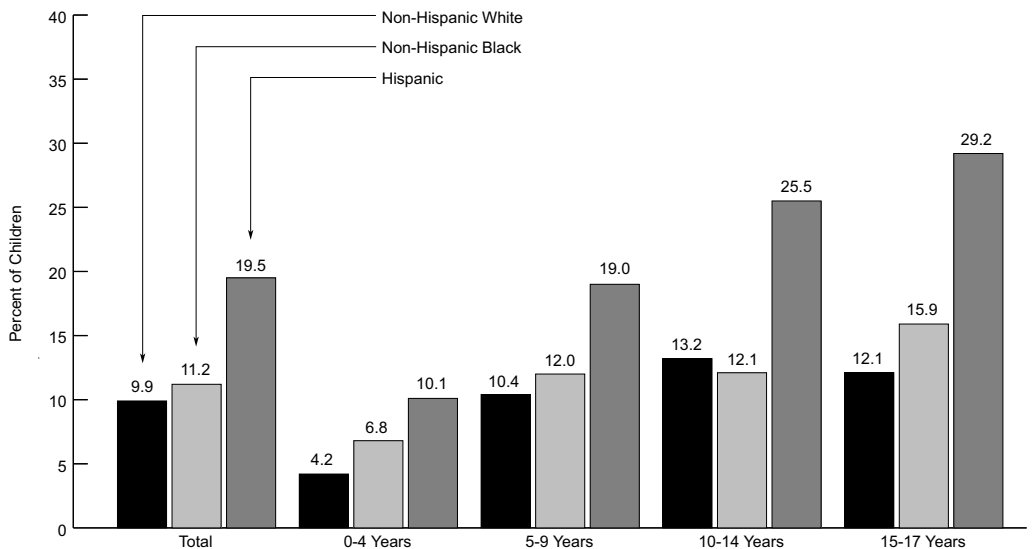
TIMING OF PHYSICIAN VISITS

In 2003, 12.2 percent of children under 18 years of age had not seen a physician or other health care professional in the previous year (not including overnight hospitalization, trips to the emergency room, home visits, or dental visits). Older children were more likely than younger children to go without a physician visit. Nearly 16 percent of 15- to 17-year-olds had not had a physician visit in the previous year, compared to only 5.8 percent of children under 5 years of age.

Across all age groups, Hispanic children were the least likely to have seen a physician in the prior year; non-Hispanic White children were most likely to have seen a physician, except among 10- to 14-year-olds where non-Hispanic Black children were the most likely. At all ages, Hispanic children were at least 45 percent more likely than non-Hispanic White children to have had no physician visits.

Children Reported Not to Have Seen a Physician or Other Health Professional in the Past 12 Months, by Age and Race/Ethnicity: 2003

Source (III.4): Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey



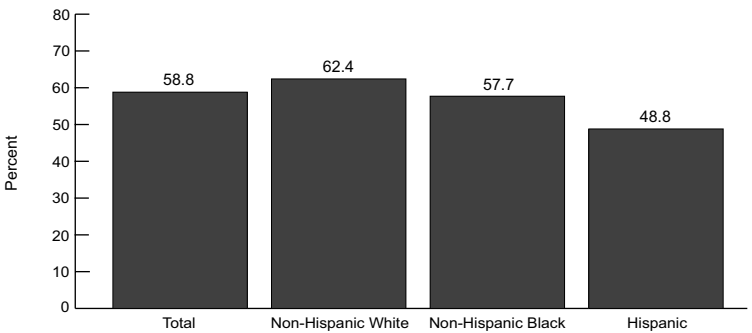
RECEIPT OF PREVENTIVE CARE

In 2003, 58.8 percent of children were reported by parents to have had both a preventive medical and dental visit in the past year. The American Academy of Pediatrics (AAP) recommends that children have eight health care visits in their first year, three in their second year, and at least one per year from middle childhood through adolescence. The AAP also recommends that all children receive an oral health risk assessment by 6 months of age and a dental referral by 3 years; earlier referrals are appropriate for children found to be at risk. The traditional recommendation for oral health supervision is every 6 months thereafter; however, this should also be adjusted based on each child's individual risk.

Males and females were equally as likely to have had both a preventive medical and dental visit in the past year; however, the rate of preventive visits varied by age, race and ethnicity, and family income. Children ages 6 to 11 years are most likely to have received both preventive and dental visits (63.0 percent), followed by children ages 12 to 17 years (61.9 percent). Receipt of regular preventive care rose with family income: children with family incomes below 100 percent of the Federal poverty level (FPL) were least likely to have received care in the past year (48.3 percent), while children with family incomes at 400 percent of the FPL or higher were most likely (69.8 percent). By race and ethnicity, Hispanic children were least likely to have received both types of care in the past year (48.8 percent) while non-Hispanic White children were most likely (62.4 percent).

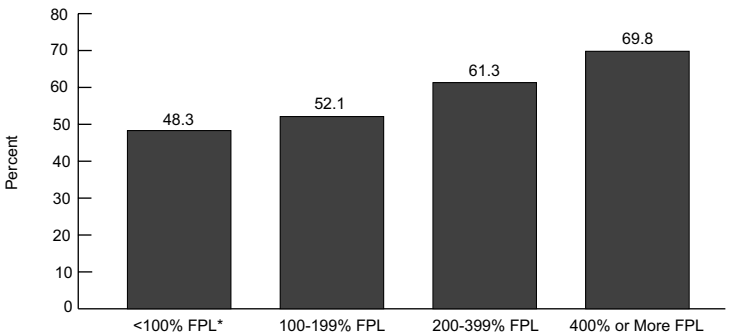
Children Aged 0-17 Years Who Have Received Preventive Medical and Dental Care in the Past Year, by Race/Ethnicity: 2003

Source (I.2): Centers for Disease Control, National Center for Health Statistics, National Survey of Children's Health



Children Aged 0-17 Years Who Have Received Preventive Medical and Dental Care in the Past Year, by Family Income: 2003

Source (I.2): Centers for Disease Control, National Center for Health Statistics, National Survey of Children's Health



**Federal Poverty Level, equal to $18,400 for a family of four in 2003.*

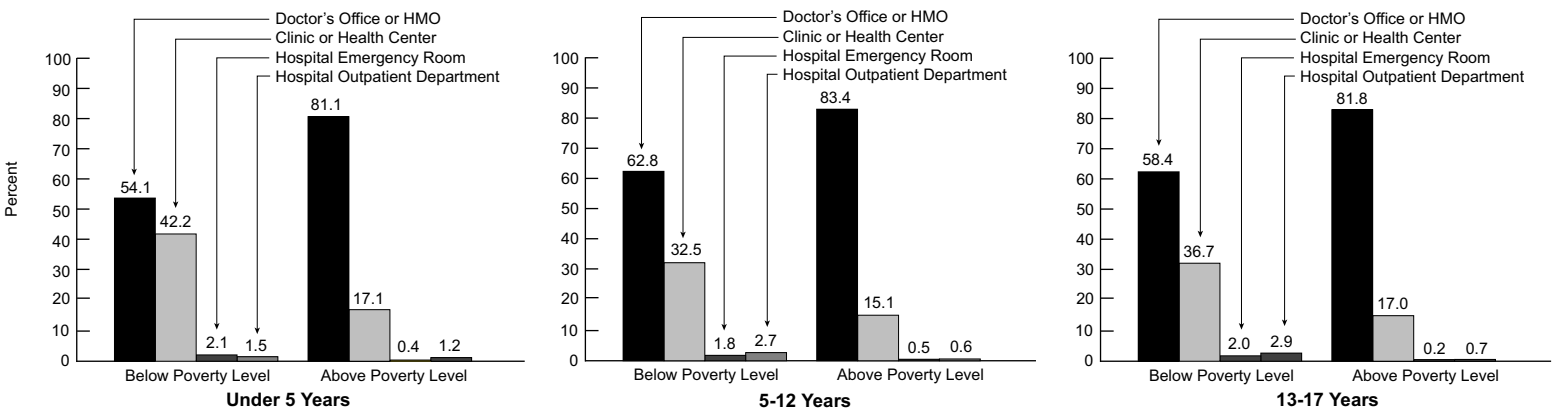
PLACE OF PHYSICIAN CONTACT

In 2003, a doctor's office or HMO was the usual place of sick care (not including routine or preventive care) for nearly 79 percent of children in the United States, a rate that varies by age and family income. Children with family incomes above the poverty level were more likely to visit a doctor's office or HMO for sick care than children in poverty (82.3 versus 58.9 percent), and were less likely to visit a clinic or health center (16.2 versus 36.7 percent). Only a small proportion of children used a hospital emergency room or outpatient department as a source of sick care, but children with family incomes below the poverty level were more likely to do so than children from families with higher incomes.

Younger children were more likely than older children to visit clinics or health centers, hospital emergency rooms, and hospital outpatient departments when sick. Children ages 5 to 12 years were more likely than their older and younger counterparts to use a doctor's office or HMO as a source of care.

Place of Physician Contact,* by Age and Poverty Level: 2003

Source (III.4): Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey



*The place where the child usually goes when sick; does not include routine or preventive care visits.

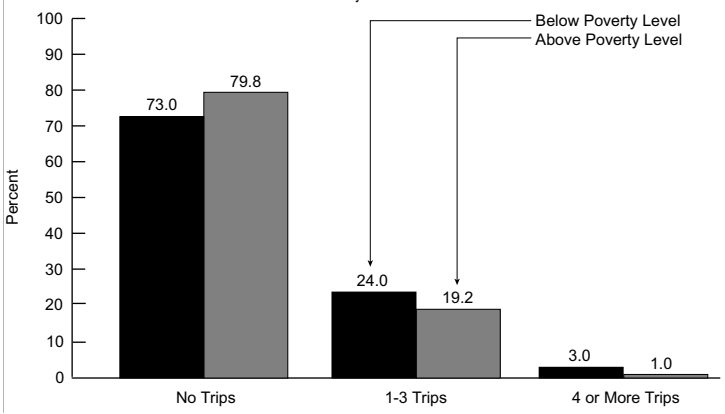
HOSPITAL UTILIZATION

In 2003, over 20 percent of children went to a hospital emergency room or emergency department (ER/ED) at least once. Children with family incomes above the Federal poverty level (FPL) were less likely than children living below the FPL to have visited the ER/ED. Children in low-income families were more likely to have gone one to three times (24.0 versus 19.2 percent) and four or more times (3.0 versus 1.0 percent). Despite this difference, there was little disparity in the number of nights spent in the hospital by FPL.

The rate of ER/ED visits also varied by a number of other factors, including sex, age, and race and ethnicity. Males under 18 years of age were more likely than their female counterparts to have made any trips to the ER/ED (22.4 versus 19.3 percent). More specifically, males were more likely than females to have gone one to three times, while both sexes were equally likely to have made four or more visits. By age, children under 5 years had the highest rate of ER/ED visits (27.3 percent), followed by children 15 to 17 years (20.8 percent). Non-Hispanic Black children had the highest rate of ER/ED visits (24.1 percent), followed by Hispanic and non-Hispanic White children (20.3 and 20.6 percent, respectively).

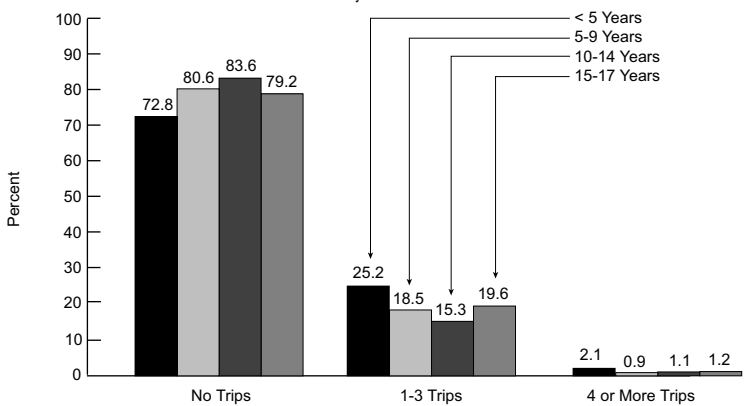
Children's Trips to the Emergency Room/Emergency Department, by Poverty Level: 2003

Source (III.4): Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey



Children's Trips to the Emergency Room/Emergency Department, by Age: 2003

Source (III.4): Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey



HEALTH CARE FINANCING

In 2003, 8.4 million children younger than 18 years of age (11.4 percent) had no health insurance coverage, and almost one-third of children were publicly insured.

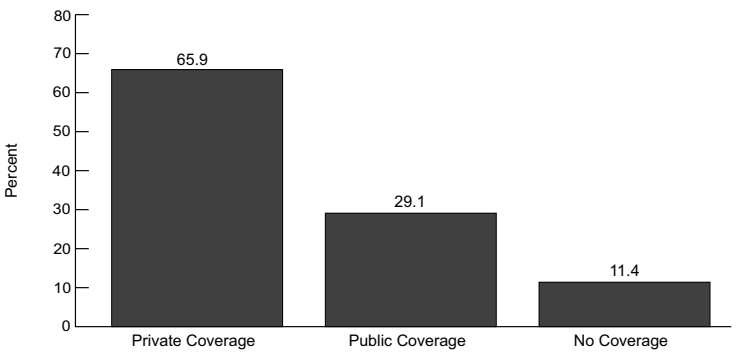
Children with family incomes below the Federal poverty level (FPL) were more likely than children with family incomes of 200 percent of FPL or above to have public insurance (66.8 versus 12.6 percent) or be uninsured (19.5 versus 6.7 percent). Only 12.4 percent of children with family incomes below the FPL had employment-based coverage, compared to 78.6 percent with family incomes of 200 percent of FPL or above.

Although over 90 percent of privately insured children received insurance that was employment-based, children of employed adults may not receive coverage because it is not offered by the employer or it is prohibitively expensive. In 2003, almost two-thirds of uninsured children lived in families whose head was employed year-round on a full-time basis.

In 1997, the State Children's Health Insurance Program (SCHIP) was created in response to the growing number of uninsured children in low-income working families. In 2003, 5.8 million children were enrolled in SCHIP. Although designed to cover children with a family income of below 200 percent of FPL, many States have expanded eligibility to children with higher family income; as of September 2003, 39 States and the District of Columbia had SCHIP coverage for children living at 200 percent of FPL and higher.

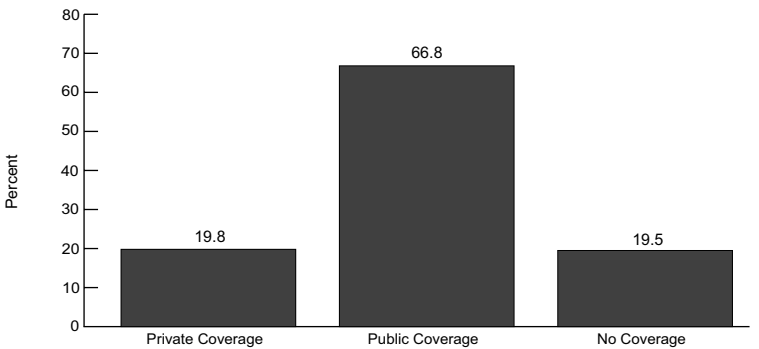
Health Insurance Coverage* Among Children Under Age 18: 2003

Source (I.3): U.S. Census Bureau, Current Population Survey



Health Insurance Coverage* Among Children Living in Families Below 100 Percent of Poverty Level: 2003

Source (III.5): Employee Benefit Research Institute, Analysis of Current Population Survey



**Total equals more than 100% because children may have more than one source of coverage.*

PRENATAL CARE

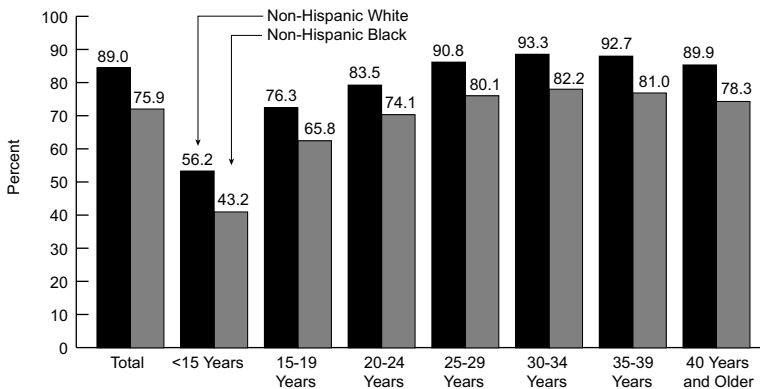
Timely Prenatal Care. Prenatal care—especially care beginning in the first trimester—improves pregnancy outcomes by identifying and managing chronic and pregnancy-related conditions and providing expectant parents with relevant health care advice. The rate of first trimester prenatal care utilization has been increasing fairly steadily since the early 1990s, and in 2003, 84.1 percent of women received prenatal care during the first trimester of pregnancy.

The increase in prenatal care utilization over the past decade has been especially remarkable among racial and ethnic groups with historically low rates of prenatal care. The proportion of non-Hispanic Black, Hispanic, and American Indian women receiving early prenatal care increased by 20 percent or more since 1990; however, disparities still exist. In 2003, non-Hispanic White women had the highest rates of early prenatal care utilization (89.0 percent), followed by Asian/Pacific Islander women (85.4 percent), non-Hispanic Black women (75.9 percent), and Hispanic women (77.5 percent); American Indian women had the lowest rate of early prenatal care utilization (70.8 percent).

Late or No Prenatal Care. The percentage of women beginning prenatal care in the third trimester or going without prenatal care decreased slightly to 3.5 percent in 2003. Hispanic and non-Hispanic Black women are more than twice as likely than non-Hispanic White women to receive late or no prenatal care. Other risk factors for late or no prenatal care include being younger than 20 years old, being unmarried, and having low educational attainment.

Mothers Beginning Prenatal Care in the First Trimester, by Age and Race: 2003

Source (I.5): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



Mothers Receiving Late or No Prenatal Care, by Age and Race: 2003

Source (I.5): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System